

REMARKS

This application has been reviewed in light of the Office Action dated December 8, 2009. Claims 9, 10, 12, 13, and 15 are presented for examination, of which Claim 9 and 13 are in independent form. Claims 11 and 14 have been withdrawn from consideration. Claim 12 has been amended. Applicant requests favorable reconsideration and allowance of the subject application.

The drawings were objected to for allegedly not showing that the “light emitting diode die is mounted face down on the light emitting diode printed circuit board”. Applicant notes that in Figs. 1-3, the light emitting diode 3 is mounted to the light emitting diode printed circuit board 6 and is mounted face down. The light emitting diode 3 is spaced from the printed circuit board 6 by the die attach 4. To clarify this point further Claim 12 has been amended to recite that the “light emitting diode die is mounted face down to the light emitting diode printed circuit board”. Accordingly, Applicant believes that the amendment to Claim 12 renders the objection to the drawings moot. Applicant submits that the objection to the drawings has been obviated and respectfully requests that the objection be withdrawn.

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. Appln. Pub. 2002/0149102 (Hashemi et al.; hereinafter “Hashemi”) in view of U.S. Pat. 7,244,965 (Andrews et al.; hereinafter “Andrews”); Claim 11 was rejected over Hashemi, Andrews, and U.S. Pat. Appln. Pub. 2003/0189829 (Shimizu et al.; hereinafter “Shimizu”); and Claims 13 and 15 were rejected over Hashemi, Andrews, and U.S. Patent 6,614,103 (Durocher et al.; hereinafter “Durocher”). Applicant traverses the rejection of the claims and submits that independent Claims 9 and 13, together with the claims dependent therefrom, are patentably distinct from the cited art for at least the following reasons.

Claim 9 is directed to a light emitting diode that includes at least one light emitting diode die, arranged on a light emitting diode printed circuit board by means of a die attach. The light emitting diode printed circuit board includes rear side contacts at a lower surface of the printed circuit board. The rear side contacts at least partially overlap with contours of the light emitting diode die and are formed in such a way as to overlap with at least half of the lower surface of the printed circuit board. The printed circuit board comprises a plurality of through-contacts thermally and electrically connecting the rear side contacts to contact areas formed on an upper surface of the printed circuit board.

Among other notable features of Claim 9 is that at least one light emitting diode die is arranged on a light emitting diode printed circuit board and that the rear side contacts at least partially overlap with contours of the light emitting diode die and are formed in such a way as to overlap with at least half of the lower surface of the printed circuit board.

The Office Action concedes that Hashemi does not “disclose the light emitting diode substrate is a printed circuit board; and the rear side contacts are formed in such a way as to overlap with at least half of the lower surface of the printed circuit board.”

To remedy the deficiencies of Hashemi, the Office Action cites Andrews as allegedly teaching the noted features of Claim 9. However, Andrews was filed on October 22, 2003 as a continuation-in-part of U.S. Pat. Appln. 10/446,532 (the ‘532 application), which was filed on May 27, 2003 and issued as U.S. Pat. 7,264,378 on September 4, 2007. The matter relied on by the Office Action (the embodiment of the semiconductor package shown in Figs. 7C) was only disclosed as new matter on October 22, 2003, which is later than the foreign priority date to which the present application is entitled (July 11, 2003).

Applicant has previously perfected its foreign priority date by filing a sworn English translation of priority Austrian Application No. A1072/2003, in the U.S. Patent and Trademark Office. Therefore, the rejection of Claim 9 is invalid because it is based upon the teaching of Fig. 7C of Andrews which is not prior art against the subject application. Withdrawal of the rejection is thus requested.

Independent Claim 13 recites features similar to those discussed above with respect to Claim 9. Claim 13 is believed to be patentable over the art relied on to reject that claim in the Office Action for the same reasons discussed above in connection with Claim 9.

The other claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable over the art relied on in the Office Action for the same reasons.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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